

## ABSTRACT

A piezoelectric ceramics having ceramic particles,  
5 wherein said ceramic particles comprises bismuth layer  
compound containing at least Sr, Ln (note that Ln is a  
lanthanoid element), Bi, Ti and O and including  
M<sup>II</sup>Bi<sub>4</sub>Ti<sub>4</sub>O<sub>15</sub> type crystal (M<sup>II</sup> is an element composed of Sr  
and Ln) as a main component, and an oxide of Mn as a  
10 subcomponent; and an average particle diameter by the  
code length measuring method is 0.8 to 4.7  $\mu\text{m}$ : by which  
it is possible to provide piezoelectric ceramics having a  
large  $Q_{\max}$  in a third harmonic mode of thickness vertical  
vibration in a relatively high frequency band (for  
15 example, 16 to 65 MHz), a resonator an other  
piezoelectric element comprising the piezoelectric  
ceramics as a piezoelectric substance thereof.